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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/044,544	01/11/2002	Ramesh Pendakur	42390P11540	9141

8791 7590 03/28/2006

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EXAMINER

PARRY, CHRISTOPHER L

ART UNIT PAPER NUMBER

2623

DATE MAILED: 03/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/044,544	<b>Applicant(s)</b> PENDAKUR ET AL.	
	<b>Examiner</b> Chris Parry	<b>Art Unit</b> 2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>3/4/02</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: Figure 11 omits payload streams 1136, 1137, 1138, and 1139. The streams must be referenced individually in the specification unless streams 1135-1140 (see paragraph 65) are shown in the drawing. This correction should further be made in reference to figures 13-15 (see paragraphs 69-70 and 72-73). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Reference sign 720 in figure 7, reference sign 915 in figure 9, reference

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sign 1105 and reference sign 1635 in figure 16. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Specification***

3. The disclosure is objected to because of the following informalities: On page 10, paragraph 42, line 7, "the MSO 210 is optional in that the content provide 205 may in fact be an MSO 210" should be --the MSO 210 is optional, in that the content provide 205 may in fact be an MSO 210--. On page 11, paragraph 44, line 1, "The content data can then be sent 225 from the content provider 205" should be --The content data can then be sent from the content provider 205--. On page 12, paragraph 45, line 1, "The MSO 210, if used, receives 225 content from the content provider 205 and sends 230 it to a head-end 215. An MSO 210 can receive input 225 from multiple content providers

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205" should be --The MSO 210, if used, receives content from the content provider 205 and sends it to a head-end 215. An MSO 210 can receive input from multiple content providers 205--.

Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-2, 4-12, 21-22, and 24-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. "Hendricks" (U.S. 5,600,573) in view of Dudkiewicz (U.S. 2002/0152474).

Regarding Claim 1, Hendricks discloses, a method comprising: generating packets of content data to be broadcast from a content provider system via a network wherein the packets of content data include metadata describing the content data (Col. 7, lines 46-61 and Col. 9, lines 56-65). Hendricks discloses operations center 202 or "content provider system" receives packets of data from various external sources and provides the packaged packets of data to a cable headend or remote site 208 as shown

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in figure 1. Further, the operations center 202 or "content provider system" performs two primary services, packaging packets for transmission and generating the program control information signal. The program control information signal reads on metadata as the program control information signal contains a description of the contents of the program package (including program lineup information and categories), commands to be sent to the cable headend 208 and/or set top terminal 220 (Col. 8, lines 34-38).

Hendricks further discloses, composing a playlist designating an order in which said packets of content are to be broadcast (Col. 10, lines 33-48). Hendricks discloses CAP 316 comprises a scheduler 324, which is used to compose a program lineup, or "playlist" that is used to determine what programs will be made available to remote sites 208 and at what times.

Hendricks discloses, composing a transmission of said packets of content data based on said playlist (Col. 13, lines 18-32 and Col. 20, lines 25-36). Hendricks teaches output equipment 320 receives schedule information and/or timing information for transmission of program packages from CAP 316 via system controller 312 as shown in figure 3.

Hendricks discloses, executing said transmission of said packets of content data according to said playlist (Col. 10, lines 24-36 and Col. 20, lines 25-36). As Hendricks discloses, when output equipment 320 receives the playlist information, the content is output remote sites 208.

Hendricks discloses receiving said packets of content data at a receiver connected with said content provider system via said network (Figure 1 - Col. 9, lines 13-31).

However, Hendricks fails to explicitly disclose selectively caching or presenting the packets based on a comparison of the metadata describing the content data and user profile information stored on the receiver. In an analogous art, Dudkiewicz discloses selectively caching or presenting the packets based on a comparison of the metadata describing the content data and user profile information stored on the receiver (§ 0076 – lines 6-14). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hendricks with the teachings of Dudkiewicz in order to facilitate selectively caching or presenting the packets based on a comparison of the metadata describing the content data and user profile information stored on the receiver for the benefit of determining whether the received programming will be desirable to the user for viewing or storage (Dudkiewicz - § 74).

As for Claim 2, Hendricks and Dudkiewicz disclose, wherein said generating packets of content data and said composing a playlist are performed by the content provider system (Hendricks: 202 – figure 1) (Hendricks: Col. 6, lines 15-37).

As for Claim 4, Hendricks and Dudkiewicz disclose, wherein said metadata comprises Extensible Markup Language (XML) tags (Dudkiewicz - ¶ 66, last three lines).

As for Claim 5, Hendricks and Dudkiewicz disclose, wherein said metadata comprises pre-show content discovery information (Hendricks – Col. 20, lines 33-36).

As for Claim 6, Hendricks and Dudkiewicz disclose, wherein said metadata comprises real-time content discovery information (Hendricks – Col. 20, lines 40-42).

As for Claim 7, Hendricks and Dudkiewicz disclose, wherein said generating packets of content data comprises: gathering content to be broadcast from a content cache on the content provider system (Hendricks – Col. 9, lines 56-67). Hendricks discloses receiver 300 receives or “gathers” content from external sources and the received content is stored or “cached” in storage device 308.

Hendricks and Dudkiewicz disclose, separating said content into packages and package elements within the packages (Hendricks – Col. 7, lines 26-38).

Hendricks and Dudkiewicz disclose, assigning each package and package element a unique identifier (Hendricks – Col. 12, lines 4-6). By disclosing holder 304



organizes the programming video data or “packages” in storage device 308, the packages have to be assigned a unique identifier in order to retrieve the requested package from storage device 308.

Hendricks and Dudkiewicz disclose, storing said packages in a package cache (308 – figure 3) (Hendricks - Col. 11, lines 47-60).

Hendricks and Dudkiewicz disclose, assigning metadata tags identifying content within the packages and package elements to the packages and package elements (Hendricks - Col. 7, lines 46-56 and Col. 8, lines 30-39). Hendricks discloses CAP 316 controls the packaging process and assigns the program control information or “metadata tags” identifying content within the packages and package elements to the packages and package elements.

Hendricks and Dudkiewicz disclose, marking tagged packages as ready for inclusion in playlists (Hendricks - Col. 10, lines 39-48). Hendricks discloses the scheduler component 324 creates the program lineup information necessary to determine what programs will be make available and therefore the packages must be tagged as ready for inclusion in the program lineups or “playlists”.

As for Claim 8, Hendricks and Dudkiewicz disclose, wherein said composing a playlist comprises: grouping all related packages into content groups (Hendricks – Col. 7, lines 26-38).

Hendricks and Dudkiewicz disclose, encapsulating content groups into a playlist (Hendricks – Col. 7, lines 46-49 and Col. 8, lines 30-39).

Hendricks and Dudkiewicz disclose, passing the playlist to a transmission composition process (Hendricks – Col. 13, lines 30-32). Hendricks discloses the CAP 316 provides the schedule and timing information to the output equipment 320 or “transmission composition process”.

As for Claim 9, Hendricks and Dudkiewicz disclose, concatenating two or more portions of metadata in the playlist prior to passing the playlist to a transmission composition process to generate metadata representing the entire playlist (Hendricks – Col. 7, lines 26-38 and Col. 8, lines 30-39). Hendricks discloses packages can be schedule based on categories and therefore, CAP 316 could group or “concatenate” multiple categories together that may be related before passing the program lineup or “playlist” on to output equipment 320 or “transmission composition process”.

As for Claim 10, Hendricks and Dudkiewicz disclose, wherein said encapsulating content groups into a playlist further comprises encapsulating said content groups into a Motion Picture Experts Group-2 (MPEG-2) multiplex (Hendricks - Col. 8, lines 41-51).

As for Claim 11, Hendricks and Dudkiewicz disclose, wherein said composing a transmission comprises: selecting a playlist for scheduling (Hendricks - Col. 21, lines 10-23). Hendricks discloses CAP 316 generates a list of programs or "playlist" stored in storage device 316 and creates a schedules when to make the list of programs available to the subscribers.

Hendricks and Dudkiewicz disclose, defining playout policy parameters (Hendricks - Col. 17, lines 30-35). Hendricks reads on defining playout policy parameters as disclosed, CAP 316 comprises eleven subroutines, the cable franchise routine 616 is used to determine for each headend, how much video storage space is available and what type of video signal format and video data format is needed.

Hendricks and Dudkiewicz disclose, determining bandwidth required to transmit the playlist (Hendricks – Col. 18, lines 59-64 and Col. 21, lines 23-24). Hendricks discloses operations center 202 first determines the bandwidth required to transmit the program lineup or "playlist" and then acquires transponder space 632 to accommodate the transmission of the program lineup.

Hendricks and Dudkiewicz disclose, determining transmission policy parameters based on the bandwidth required to transmit the playlist and the playout policy parameters (Hendricks - Col. 17, lines 30-35 and Col. 18, lines 59-64). Hendricks discloses the cable franchise routine 616 determines how much storage space is available at cable headend 208 and based off this determination, the CAP 316 allocates transponder space 632 accordingly.

Hendricks and Dudkiewicz disclose, assigning network resources to the playlist based on the transmission policy (Hendricks - Col. 17, lines 28-45 and Col. 18, lines 59-64). CAP 316 allocates enough transponder space to accommodate the size of the program lineup, which is determined by the cable franchise routine 616 or “transmission policy”.

Hendricks and Dudkiewicz disclose caching the transmission as active and scheduled (Hendricks - Col. 21, lines 27-30). Hendricks discloses the signals are stored or cached in output equipment 320 before being transmitted.

As for Claim 12, Hendricks and Dudkiewicz disclose, wherein said executing said transmission comprises: reading a previously generated transmission (Hendricks – Col. 21, lines 30-33).

Hendricks and Dudkiewicz disclose loading transmission policy parameters (Hendricks, Col. 21, lines 18-20).

Hendricks and Dudkiewicz disclose encoding announcement data for each content package into an announcement data stream describing a schedule of content to be broadcast during execution of the transmission (Hendricks - Col. 20, lines 28-33). Hendricks discloses creating a program control information signal or “announcement data stream” for each package comprising the program lineup, menus, and other control information.

Hendricks and Dudkiewicz disclose encoding metadata for each content package into a metadata stream providing a description of content within a content stream (Hendricks – Col. 21, lines 27-30). Hendricks discloses the prepared packages comprise programs, a program list, a schedule, menus, and program control information and therefore the each package is encoded with metadata. Further a description of content within a content stream must be provided so remote site 208 can deliver the package to a requesting client or receiver.

Hendricks and Dudkiewicz disclose sending pre-show content discovery information describing a schedule of content to be broadcast during execution of the transmission (Hendricks - Col. 20, lines 25-36).

Hendricks and Dudkiewicz disclose sending announcement, metadata and content data streams according to a predefined timeslot format (Hendricks, Col. 21, lines 30-37). Hendricks discloses the program signals can be converted into the format that is required by the receiving remote site 208.

Regarding Claim 21, Hendricks discloses a machine-readable medium (336 – figures 2 and 6) having stored thereon data representing sequences of instructions, the sequences of instructions which, when executed by a processor, cause the processor to: generate packets of content data to be broadcast from a content provider system via a network wherein the packets of content data include metadata describing the content data (Col. 7, lines 46-61 and Col. 9, lines 56-65). Hendricks discloses operations center

202 or "content provider system" receives packets of data from various external sources and provides the packaged packets of data to a cable headend or remote site 208 as shown in figure 1. Further, the operations center 202 or "content provider system" performs two primary services, packaging packets for transmission and generating the program control information signal. The program control information signal reads on metadata as the program control information signal contains a description of the contents of the program package (including program lineup information and categories), commands to be sent to the cable headend 208 and/or set top terminal 220 (Col. 8, lines 34-38).

Hendricks further discloses, compose a playlist designating an order in which said packets of content are to be broadcast; compose a transmission of said packets of content data based on said playlist Hendricks teaches output equipment 320 receives schedule information and/or timing information for transmission of program packages from CAP 316 via system controller 312 as shown in figure 3.

Hendricks discloses, execute said transmission of said packets of content data according to said playlist (Col. 10, lines 24-36 and Col. 20, lines 25-36). As Hendricks discloses, when output equipment 320 receives the playlist information, the content is output remote sites 208.

Hendricks discloses receive said packets of content data at a receiver connected with said content provider system via said network (Figure 1 - Col. 9, lines 13-31).

However, Hendricks fails to explicitly disclose selectively cache or present the packets based on a comparison of the metadata describing the content data and user profile information stored on the receiver. In an analogous art, Dudkiewicz discloses selectively caching or presenting the packets based on a comparison of the metadata describing the content data and user profile information stored on the receiver (§ 0076 – lines 6-14). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hendricks with the teachings of Dudkiewicz in order to facilitate selectively caching or presenting the packets based on a comparison of the metadata describing the content data and user profile information stored on the receiver for the benefit of determining whether the received programming will be desirable to the user for viewing or storage (Dudkiewicz - § 74).

Considering Claim 22, the claimed elements of wherein said generating packets of content data and said composing a playlist are performed by the content provider system, corresponds with subject matter mentioned above in the rejection of claim 2, and is likewise treated.

Considering Claim 24, the claimed elements of wherein said metadata comprises Extensible Markup Language (XML) tags, corresponds with subject matter mentioned above in the rejection of claim 4, and is likewise treated.

Considering Claim 25, the claimed elements of wherein said metadata comprises pre-show content discovery information, corresponds with subject matter mentioned above in the rejection of claim 5, and is likewise treated.

Considering Claim 26, the claimed elements of wherein said metadata comprises real-time content discovery information, corresponds with subject matter mentioned above in the rejection of claim 6, and is likewise treated.

Considering Claim 27, the claimed elements of gathering content to be broadcast from a content cache on the content provider system; separating said content into packages and package elements within the packages; assigning each package and package element a unique identifier; storing said packages in a package cache; assigning metadata tags identifying content within the packages and package elements to the packages and package elements; and marking tagged packages as ready for inclusion in playlists, corresponds with subject matter mentioned above in the rejection of claim 7, and is likewise treated.

Considering Claim 28, the claimed elements of wherein said composing a playlist comprises: grouping all related packages into content groups; encapsulating content groups into a playlist; and passing the playlist to a transmission composition process,



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corresponds with subject matter mentioned above in the rejection of claim 8, and is likewise treated.

Considering Claim 29, the claimed elements of further comprising concatenating two or more portions of metadata in the playlist prior to passing the playlist to a transmission composition process to generate metadata representing the entire playlist, corresponds with subject matter mentioned above in the rejection of claim 9, and is likewise treated.

Considering Claim 30, the claimed elements of selecting a playlist for scheduling; defining playout policy parameters; determining bandwidth required to transmit the playlist; determining transmission policy parameters based on the bandwidth required to transmit the playlist and the playout policy parameters; assigning network resources to the playlist based on the transmission policy; caching the transmission as active and scheduled, corresponds with subject matter mentioned above in the rejection of claim 11, and is likewise treated.

Considering Claim 31, the claimed elements of reading a previously generated transmission; loading transmission policy parameters; encoding announcement data for each content package into an announcement data stream describing a schedule of

content to be broadcast during execution of the transmission; encoding metadata for each content package into a metadata stream providing a description of content within a content stream; sending pre-show content discovery information describing a schedule of content to be broadcast during execution of the transmission; and sending announcement, metadata and content data streams according to a predefined timeslot format, corresponds with subject matter mentioned above in the rejection of claim 12, and is likewise treated.

6. Claims 13 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks in view of Dudkiewicz as applied to claim 1 above, and further in view of Mitchell (U.S. 2002/0162120).

As for Claims 13 and 32, Hendricks and Dudkiewicz disclose, wherein said receiving said packets of content data comprises: reading the announcement data stream (Dudkiewicz - ¶ 73).

Hendricks and Dudkiewicz further disclose, correlating metadata from the decoded metadata stream to user profile information stored within the receiver (Dudkiewicz - ¶ 76). Dudkiewicz discloses the client device can analyze received metadata to determine desirable upcoming programming events based on the users stored profile.

Hendricks and Dudkiewicz disclose, preparing cache space adequate to store content that has metadata matching the user profile information (Dudkiewicz - ¶ 76). Dudkiewicz discloses recording upcoming programming that matches with the users stored profile, so therefore the cache space or memory must be prepared in order for there to be space within memory to record or store upcoming programming.

Hendricks and Dudkiewicz disclose, caching packages with metadata highly correlated with the filtering criteria (Dudkiewicz - ¶ 76). Dudkiewicz discloses recording upcoming programming events based on the desirability of the programming event as determined with respect to one or more viewer profiles stored in the client device.

However, the combination of Hendricks and Dudkiewicz fail to explicitly disclose finding a predetermined metadata Uniform Resource Locator (URL) in the announcement data stream identifying a location of the metadata stream and decoding the metadata stream identified by the predetermined metadata URL. In an analogous art, Mitchell teaches finding a predetermined metadata Uniform Resource Locator (URL) in the announcement data stream identifying a location of the metadata stream (¶ 64, 73, and 74). Mitchell discloses triggers or “announcements” received by STB 102 or “receiving device” include metadata that identifies the URL addresses or “metadata URL” to the particular television channel, the particular program, and the time of broadcast. Further, the URL provides the location of the received metadata stream. Mitchell further teaches, decoding the metadata stream identified by the predetermined metadata URL (¶ 28). Mitchell discloses converter 206 may process or “decode” URL addresses that are received via a stream separate from the television signals or

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received via some other connection to the Internet or headend. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Hendricks and Dudkiewicz to include finding a predetermined metadata Uniform Resource Locator (URL) in the announcement data stream identifying a location of the metadata stream and decoding the metadata stream identified by the predetermined metadata URL as taught by Mitchell for the benefit of assisting the viewer in placing the supplemental content in context, or to otherwise enhance the integration of the supplemental content with the viewing experience (Mitchell - ¶ 73).

7. Claims 3, 14-19, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks et al. "Hendricks '573" (U.S. 5,600,573) in view of Hendricks et al. "Hendricks '585" (U.S. 6,463,585) and further in view of Dudkiewicz (U.S. 2002/0152474).

As for Claims 3 and 23, Hendricks '573 and Dudkiewicz fail to disclose wherein said composing a transmission and executing said transmission are performed by a broadcast system head-end. In an analogous art, Hendricks '585 discloses the functions of the operations center 202 or "content provider" and the cable headend 208 may be combined (Col. 9, lines 59-60). Hendricks '585 teaches although operations center 202 can compose a transmission and execute the transmission, this process can as well be

executed at the headend 208. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hendricks '573 to include headend 208 composing a transmission of said packets of content data based on said playlist and executing said transmission of said packets of content data according to said playlist as taught by Hendricks '585 for the benefit of using the cable headend to reduce the processing and transmission load on the operations center.

Regarding Claim 14, Hendricks '573 discloses a system (200 – figure 1) comprising: a content provider system (202 – figure 1) to generate packets of content data to be broadcast from the content provider system via a first network connected with the content provider system wherein the packets of content data include metadata describing the content data (Col. 7, lines 46-61 and Col. 9, lines 56-65) and compose a playlist designating an order in which said packets of content are to be broadcast (Col. 10, lines 33-48). Hendricks '573 discloses operations center 202 or “content provider system” receives packets of data from various external sources and provides the packaged packets of data to a cable headend or remote site 208 as shown in figure 1. Further, the operations center 202 or “content provider system” performs two primary services, packaging packets for transmission and generating the program control information signal. The program control information signal reads on metadata as the program control information signal contains a description of the contents of the program package (including program lineup information and categories), commands to be sent to the cable headend 208 and/or set top terminal 220 (Col. 8, lines 34-38). Hendricks '573

discloses CAP 316 comprises a scheduler 324 which is used to compose a program lineup or "playlist" that is used to determine what programs will be made available to remote sites 208 and at what times.

Hendricks '573 discloses a broadcast system head-end (208 – figure 1) connected with said content provider system (202 – figure 1) via said first network (206 – figure 1) to receive said packets of content data and said playlist... (Col. 6, lines 15-29).

Hendricks '573 discloses a receiver (220 – figure 1) connected with said broadcast system head-end (208 – figure 1) via a second network (210 – figure 1) to receive said packets of content data... (Col. 9, lines 21-35).

Hendricks '573 discloses operations center 202 can compose a transmission of said packets of content data based on said playlist (Col. 13, lines 18-32 and Col. 20, lines 25-36), and execute said transmission of said packets of content data according to said playlist (Col. 10, lines 24-36 and Col. 20, lines 25-36). However, Hendricks '573 fails to disclose these operations are performed by the headend 208. In an analogous art, Hendricks '585 discloses the functions of the operations center 202 or "content provider" and the cable headend 208 may be combined (Col. 9, lines 59-60). Hendricks '585 teaches although operations center 202 can compose a transmission and execute the transmission, this process can as well be executed at the headend 208. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hendricks '573 to include headend 208 composing a transmission of

said packets of content data based on said playlist and executing said transmission of said packets of content data according to said playlist as taught by Hendricks '585 for the benefit of using the cable headend to reduce the processing and transmission load on the operations center.

The combination of Hendricks '573 and Hendricks '585 fail to explicitly disclose selectively cache or present the packets based on a comparison of the metadata describing the content data and user profile information stored on the receiver. In an analogous art, Dudkiewicz discloses selectively caching or presenting the packets based on a comparison of the metadata describing the content data and user profile information stored on the receiver (§ 0076 – lines 6-14). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hendricks '573 and Hendricks '585 with the teachings of Dudkiewicz in order to facilitate selectively caching or presenting the packets based on a comparison of the metadata describing the content data and user profile information stored on the receiver for the benefit of determining whether the received programming will be desirable to the user for viewing or storage (Dudkiewicz - § 74).

As for Claim 15, Hendricks '573, Hendricks '585, and Dudkiewicz disclose, wherein said content provider system: gathers content to be broadcast from a content cache on the content provider system (Hendricks '573 – Col. 9, lines 56-67). Hendricks

'573 discloses receiver 300 receives or "gathers" content from external sources and the received content is stored or "cached" in storage device 308.

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, separates said content into packages and package elements within the packages (Hendricks '573 – Col. 7, lines 26-38).

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, assigns each package and package element a unique identifier (Hendricks '573 – Col. 12, lines 4-6). By disclosing holder 304 organizes the programming video data or "packages" in storage device 308, the packages have to be assigned a unique identifier in order to retrieve the requested package from storage device 308.

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, stores said packages in a package cache (308 – figure 3) (Hendricks '573 - Col. 11, lines 47-60).

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, assigns metadata tags identifying content within the packages and package elements to the packages and package elements (Hendricks '573 - Col. 7, lines 46-56 and Col. 8, lines 30-39). Hendricks '573 discloses CAP 316 controls the packaging process and assigns the program control information or "metadata tags" identifying content within the packages and package elements to the packages and package elements.

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, marks tagged packages as ready for inclusion in playlists (Hendricks '573 - Col. 10, lines 39-48). Hendricks '573 discloses the scheduler component 324 creates the program lineup



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information necessary to determine what programs will be make available and therefore the packages must be tagged as ready for inclusion in the program lineups or “playlists”.

As for Claim 16, Hendricks '573, Hendricks '585, and Dudkiewicz disclose, wherein said content provider system: groups all related packages into content groups (Hendricks '573 – Col. 7, lines 26-38).

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, encapsulates content groups into a playlist (Hendricks '573 – Col. 7, lines 46-49 and Col. 8, lines 30-39).

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, passes the playlist to a transmission composition process (Hendricks '573 – Col. 13, lines 30-32). Hendricks '573 discloses the CAP 316 provides the schedule and timing information to the output equipment 320 or “transmission composition process”.

As for Claim 17, Hendricks '573, Hendricks '585, and Dudkiewicz disclose, content provider system further concatenates two or more portions of metadata in the playlist prior to passing the playlist to a transmission composition process to generate metadata representing the entire playlist (Hendricks '573 – Col. 7, lines 26-38 and Col. 8, lines 30-39). Hendricks '573 discloses packages can be schedule based on categories and therefore, CAP 316 could group or “concatenate” multiple categories

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together that may be related before passing the program lineup or "playlist" on to output equipment 320 or "transmission composition process".

As for Claim 18, Hendricks '573, Hendricks '585, and Dudkiewicz disclose, wherein said broadcast system head-end (Hendricks '585 – Col. 9, lines 59-60): selects a playlist for scheduling (Hendricks '573 - Col. 21, lines 10-23). Hendricks '573 discloses CAP 316 generates a list of programs or "playlist" stored in storage device 316 and creates a schedules when to make the list of programs available to the subscribers.

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, defines playout policy parameters (Hendricks '573 - Col. 17, lines 30-35). Hendricks '573 reads on defining playout policy parameters as disclosed, CAP 316 comprises eleven subroutines, the cable franchise routine 616 is used to determine for each headend, how much video storage space is available and what type of video signal format and video data format is needed.

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, determines bandwidth required to transmit the playlist (Hendricks '573 – Col. 18, lines 59-64 and Col. 21, lines 23-24). Hendricks '573 discloses operations center 202 first determines the bandwidth required to transmit the program lineup or "playlist" and then acquires transponder space 632 to accommodate the transmission of the program lineup.

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, determines transmission policy parameters based on the bandwidth required to transmit the playlist and the playout policy parameters (Hendricks '573 - Col. 17, lines 30-35 and Col. 18, lines 59-64). Hendricks '573 discloses the cable franchise routine 616 determines how much storage space is available at cable headend 208 and based off this determination, the CAP 316 allocates transponder space 632 accordingly.

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, assigns network resources to the playlist based on the transmission policy (Hendricks '573 - Col. 17, lines 28-45 and Col. 18, lines 59-64). CAP 316 allocates enough transponder space to accommodate the size of the program lineup, which is determined by the cable franchise routine 616 or "transmission policy".

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, caching the transmission as active and scheduled (Hendricks '573 - Col. 21, lines 27-30). Hendricks '573 discloses the signals are stored or cached in output equipment 320 before being transmitted.

As for Claim 19, Hendricks '573, Hendricks '585, and Dudkiewicz disclose, wherein said broadcast system head-end (Hendricks '585 – Col. 9, lines 59-60): reads a previously generated transmission (Hendricks '573 – Col. 21, lines 30-33).

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, loads transmission policy parameters (Hendricks '573, Col. 21, lines 18-20).

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, encodes announcement data for each content package into an announcement data stream describing a schedule of content to be broadcast during execution of the transmission (Hendricks '573 - Col. 20, lines 28-33). Hendricks '573 discloses creating a program control information signal or "announcement data stream" for each package comprising the program lineup, menus, and other control information.

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, encodes metadata for each content package into a metadata stream providing a description of content within a content stream (Hendricks '573 – Col. 21, lines 27-30). Hendricks '573 discloses the prepared packages comprise programs, a program list, a schedule, menus, and program control information and therefore the each package is encoded with metadata. Further a description of content within a content stream must be provided so remote site 208 can deliver the package to a requesting client or receiver.

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, sends pre-show content discovery information describing a schedule of content to be broadcast during execution of the transmission (Hendricks '573 - Col. 20, lines 25-36).

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, sends announcement, metadata and content data streams according to a predefined timeslot format (Hendricks '573, Col. 21, lines 30-37). Hendricks '573 discloses the program signals can be converted into the format that is required by the receiving remote site 208.

8. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hendricks '573 in view of Hendricks '585 in view of Dudkiewicz as applied to claim 14 above, and further in view of Mitchell (U.S. 2002/0162120).

As for Claim 20, Hendricks '573, Hendricks '585, and Dudkiewicz disclose, wherein said receiver: reads the announcement data stream (Dudkiewicz - ¶ 73).

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, correlates metadata from the decoded metadata stream to user profile information stored within the receiver (Dudkiewicz - ¶ 76). Dudkiewicz discloses the client device can analyze received metadata to determine desirable upcoming programming events based on the users stored profile.

Hendricks '573, Hendricks '585, and Dudkiewicz disclose, prepares cache space adequate to store content that has metadata matching the user profile information (Dudkiewicz - ¶ 76). Dudkiewicz discloses recording upcoming programming that matches with the users stored profile, so therefore the cache space or memory must be prepared in order for there to be space within memory to record or store upcoming programming.

Hendricks '573, Hendricks '585, and Dudkiewicz disclose caches packages with metadata highly correlated with the filtering criteria (Dudkiewicz - ¶ 76). Dudkiewicz discloses recording upcoming programming events based on the desirability of the

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programming event as determined with respect to one or more viewer profiles stored in the client device.

However, the combination of Hendricks '573, Hendricks '585, and Dudkiewicz fail to explicitly disclose, finding a predetermined metadata Uniform Resource Locator (URL) in the announcement data stream identifying a location of the metadata stream and decoding the metadata stream identified by the predetermined metadata URL. In an analogous art, Mitchell teaches finding a predetermined metadata Uniform Resource Locator (URL) in the announcement data stream identifying a location of the metadata stream (§§ 64, 73, and 74). Mitchell discloses triggers or "announcements" received by STB 102 or "receiving device" include metadata that identifies the URL addresses or "metadata URL" to the particular television channel, the particular program, and the time of broadcast. Further, the URL provides the location of the received metadata stream. Mitchell further teaches, decoding the metadata stream identified by the predetermined metadata URL (§§ 28). Mitchell discloses converter 206 may process or "decode" URL addresses that are received via a stream separate from the television signals or received via some other connection to the Internet or headend. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Hendricks '573, Hendricks '585, and Dudkiewicz to include finding a predetermined metadata Uniform Resource Locator (URL) in the announcement data stream identifying a location of the metadata stream and decoding the metadata stream identified by the predetermined metadata URL as taught by Mitchell for the benefit of assisting the viewer in placing the supplemental content in

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context, or to otherwise enhance the integration of the supplemental content with the viewing experience (§ 73).


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chris Parry whose telephone number is (571) 272-8328. The examiner can normally be reached on Monday through Friday, 8:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (571) 272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiners Initials: CLP  
March 13, 2006

  
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